40. (Previously Amended) The method of claim 39 wherein the step of selectively inserting information entries comprises inserting information entries that overlap with one another, if the overlapping information entries have not been designated as being exclusive.

41. (Previously Amended) The method of claim 38 further comprising selectively copying reconciled information from the at least one intermediate data set into the first data set and selectively copying reconciled information from the at least one intermediate data set into the second data set.

42. (Previously Amended) The method of claim 41 wherein the reconciling step comprises selectively copying information from the first data set into the at least one intermediate data set and selectively copying information from the second data set into the at least one intermediate data set.

Remarks

Status of application

Claims 1-42 are pending in the subject application. Claims 1, 3, 6-12, 15-17, 23-25, 32, 33 and 37-42 stand rejected over art. Applicant gratefully acknowledges the Examiner's allowance of claim 2. Additionally, the Examiner has indicated allowable subject matter in claims 4, 5, 13, 14, 18-22, 26-31, and 34-36. By this Amendment, certain claims have been amended in an effort to further distinguish Applicant's claimed invention. Reexamination and reconsideration of the amended claims are respectfully requested.

General

A. Objected-to claims

Claims 4, 5, 13-14, 18-22, 26-31, and 34-36 are objected to as being dependent upon a rejected base claim, but have been indicated to be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The claims have been amended accordingly, and thus are now believed to be in condition for allowance.

The invention

The present invention provides a system and methodology for reconciling multiple schedules having ordinal intervals (e.g., time slots) on a computer system (including receiving information from other computer systems or data processing devices). The computer system includes a processing unit, system memory, display device, and input device. An interval is selected which is common to the schedules and derived schedules are created for each schedule using the common interval. The derived schedules are than synchronized by matching like time slots of the schedules. Empty tine slots are inserted into each derived schedule to correspond to time slots in the schedules that conflict. The resulting schedules are displayed on the display device for user reconciliation.

Merely by way of example, suppose one calendar has been established with 15 minute time slots or intervals. Suppose another calendar has been established with 30 minute time slots or intervals. The system reconciles these calendars by selecting a time interval that is workable with both calendars. In this particular example, the system might select, for example, 15 minute or 5 minute time intervals for the reconciliation process. Further, to effect reconciliation based on this system-selected time interval, the system creates an intermediate data structure having the selected compatible time interval.

The present invention also provides an interface and supporting techniques which assists a user with the task of reconciling or synchronizing scheduling information, among different schedules (typically from different devices). In the background, the invention provides a computer-implemented methodology which requires the underlying computer system -- not the user -- to intelligently match up corresponding or like entries from the different schedules. Here, the arduous or tedious portion of the task is accomplished intelligently by the computer system (typically in the background), thus allowing the user to focus on the task at hand. However, the user may then participate in this process by employing a point-and-click interface of the invention for indicating how particular conflicts which require user intervention should be resolved.

Prior art rejection

A. General

Claims 1, 3, 6-12, 15-17, 23-25, 32, 33 and 39-42 stand rejected under 35 U.S.C. Section 103(a) as being unpatentable over Cree et al (US Patent No. 4,866,611), hereinafter "Cree." For the reasons set forth below, Applicant respectfully requests that the Examiner reconsider the Section 103 rejection, particularly in light of clarifying amendments made to these claims.

Cree discloses an electronic calendar method where the user can reconcile personal and system calendars. The personal calendar is created as a <u>copy</u> of the system calendar and includes a time stamp of its creation. Updates made an he made to both calenders. Each entry in the calenders has text, a unique structure ID, and a time stamp indicating the date and time it was created. The method involves creating one master calendar from the two calenders by identifying conflicting entries through a comparison of the time slots, structure ID, and time stamp of each entry. The conflicting entries are then flagged for presentation to the user for reconciliation.

B. Rejection of claims 1, 3, and 6-11

Regarding claims 1, 3 and 6-11, the Examiner contends that Cree discloses all of the limitations of those claims, except that the Examiner notes that Cree does not explicitly describe a step of constructing at least one list having a selected one of the ordinals. Nevertheless, the Examiner contends that this limitation could be met by changing a calendar's setting to 15 or 30 minute time intervals, and in so doing a user would have been able to insert a free time slot in a given hour time slot of a different calendar in which a meeting was set to last less than one hour but having occupied the entire hour slot. The Examiner states, as a general proposition, that motivation here arises to construct a list having a selected one of the ordinal interval in the system of Cree et al. in order to determine available time in a given calendar and reconcile at least two different whereby a common time slot is available in at least two calendars in order to schedule short appointments lasting only a few minutes.

With respect to claim 1, the claim has been amended to emphasize that the invention operates in the face of disparate intervals or time slots <u>themselves</u> (i.e., apart from any conflicting data stored) between the two sets of information. More particularly, the amendment clarifies that the invention addresses reconciliation of disparate scheduling information by creation of a compatible intermediate data structure. Consider, for instance, the following teaching from Applicant's specification (page 10, beginning at line 29):

> In a similar manner, the **granularity for the parent tables T1 and T2 are obtained** in step 452. **This information is <u>used to establish common time slots between the two synchronizing tables.</u>** For example, schedule table 301 and schedule table 302 (from FIGS. 3A-B) have the interval of thirty minutes as a common denominator (finest level of granularity). Accordingly, **the synchronizing tables will employ this determined granularity.** In step 453, entries are "padded out" (i.e., receive null values or whitespace characters) for time slots which must be added to effect the synchronization. As shown in FIG. 5, for example, the child table T2' has four time slots padded between its first event (8:00 a.m.) and its second event (10:00 a.m.). Similar padding for other time slots is likewise illustrated. Upon completion of step 453, the lists are analyzed to match up common time slots. For example, the 8:30 a.m. time slot of T1' is aligned with the 8:30 a.m. time slot of T2'. Also at this step, any automated reconciliation, (e.g., insertion of non-conflicting events) may be performed.
> (emphasis added)

As described by Applicant's specification (and accompanying Fig. 5), Applicant's claimed invention may provide reconciliation or synchronization even in the face of disparate time slots or intervals. Cree, in stark contrast, has no such feature. In fact, Cree explicitly teaches that his personal calendar is a "copy" of the system calendar (see e.g., Cree at column 4, lines 26-31). Quite simply, the Cree reference fails to even address the issue of disparate intervals or time slots, and certainly cannot be considered to provide any teaching as to the selection of a common interval or slot that would allow reconciliation or synchronization of the two sets of information (as his approach provides no support for disparate intervals). Instead, his approach assumes that the information between the two data sets is already compatible.

This distinction between Applicant's invention and the Cree reference is brought to the forefront in the amended claims. In claim 1, for instance, the claim now includes limitations of (shown in amended form):

> means for entering first information and second information, each of said first and second information including a plurality of ordinal intervals, wherein at least one of said first and second information includes a disparate ordinal interval that is not shared by the other information; [and]
> means for selecting a common ordinal interval between said first and second information, wherein all ordinal intervals are a multiple of said common ordinal interval so that all ordinal intervals may be reconciled between said first and second information; [...]

The foregoing amendment to the claim clarifies that the claimed invention is directed to reconciling or synchronizing information sets that may have disparate (i.e., non-equal) intervals between them. As this feature is completely lacking in Cree, it is respectfully submitted that the amendment overcomes the rejection under Section 103.

Similarly, other rejected claims have been amended to highlight this distinction. Amended claim 3 has been amended to include the following limitations (shown in amended form):

> detecting a difference between granularity of information represented in the first data set and the second data set which impedes synchronization being performed directly on the two data sets;
> based on the detected difference, creating at least one intermediate data set for synchronizing information between the first and second data sets, said at least one intermediate data set having a granularity which is compatible for synchronizing information in both the first data set and the second data set; [...]

Here, the claimed method requires the selection of a granularity which is compatible for synchronizing information in the two data sets. Rejected claims 6-11 depend from claim 3, and thus incorporate these limitations by virtue of their dependency. Again, as Cree is entirely silent regarding any such feature, it is respectfully submitted that the claims distinguish over that reference and that the rejection under Section 103 is overcome.

C. Rejection of claims 12, 15-17, 23-25, and 38

Regarding claims 12, 15-17, 23-25, and 38, the Examiner contends that Cree

discloses all of the limitations of those claims, in a manner similar to that above for claims 1,

3 and 6-11. Additionally, the Examiner states that Cree discloses creation of the limitation of

"at least one synchronization data structure", for instance at columns 29-32.

Regarding claim 12, the originally-filed claim is believed to distinguish over

Cree, as that reference fails to teach the creation of a derived information set in the manner

required by Applicant's claims, such as the claimed "at least one synchronization data

structure" which may receive transferred information from both original data sets for

purposes of synchronization. Nevertheless, the claim has been canceled to expedite

prosecution of the instant application; Applicant intends to pursue the claim in a continuation

application. Regarding the dependent claims of claim 12 (i.e., claims 15, 16, and 17), the

claims have been amended to now depend from claim 13, which the Examiner has previously

indicated to be allowable (subject to its rewriting, which now has been done by this

Amendment).

Regarding claim 23, the claim has been amended in a manner similar to the

above-mentioned independent claims 1 and 3. In particular, the amended claim now includes

the limitations of (shown in amended form):

> receiving a request to reconcile the at least two information
> sets, said at least two information sets including information entries which are
> initially incompatible for reconciling but which can be transferred to the third
> information set in a manner that renders them compatible for reconciling;
> including information entries from the first information set into
> the third information set;
> selectively inserting information entries from the second
> information set into the third information set, said third information set now
> containing information entries that are compatible for reconciling the first and
> second information sets; [...]

As shown, the claimed method requires the creation of a third information set which achieves

compatibility for synchronizing information in the other two sets. Rejected claims 24, 25, 32,

33, and 37 depend from claim 23, and thus incorporate these limitations by virtue of their

dependency. As Cree fails to describe any such feature and, instead, explicitly teaches away from this approach (by proposing simply the use of a copy of the system calendar), it is respectfully submitted that the claims distinguish over that reference and that the rejection under Section 103 is overcome.

Regarding claim 38, the claim has been amended in a manner similar to the other independent claims to emphasize the role of the intermediate data set in achieving compatibility for purposes of reconciling:

> providing at least one intermediate data set for reconciling information between the first and second data sets based on a <u>compatibility</u> difference between the first and second data sets which impedes reconciliation being performed directly on the first and second data sets, <u>said at least one intermediate data set being created to achieve compatibility for reconciling information between the first data set and the second data set</u>; [...]

As with other claims, this claim requires the creation of an intermediate data set which overcomes incompatibilities between the first and second data sets. Rejected claims 39-42 depend from claim 38, and thus incorporate these limitations by virtue of their dependency. Even assuming for the sake of argument that Cree implicitly teaches the creation of some sort of intermediate data structure, as the Examiner contends, Cree still teaches the use of data structures which from the outset are required to employ compatible data entries. More particularly, Cree teaches reconciling based on use of compatible time slots, structure IDs, and time stamps of the entries to be reconciled. There is no effort by Cree to attempt to support reconciling of incompatible entries, such as once having different-sized time slots. Accordingly, it is respectfully submitted that the claims, particularly in view of the foregoing amendment, distinguish over that reference and thus overcomes the Section 103 rejection.

Conclusion

In view of the foregoing remarks and the amendment to the claims, it is believed that all claims are now in condition for allowance. Hence, it is respectfully requested that the application be passed to issue at an early date. If for any reason the

Examiner feels that a telephone conference would in any way expedite prosecution of the subject application, the Examiner is invited to telephone the undersigned at (408) 395-8819.

Respectfully submitted,

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